



# PRESENTATION TO LABOR AND WORKFORCE ADVISORS

## JANUARY 31, 2013

[www.mass.gov/dcam/aep](http://www.mass.gov/dcam/aep)



Secretary Shor  
Commissioner Cornelison

Division of Capital Asset Management and Maintenance  
**D • C • A • M • M**

Governor Patrick  
Lt. Governor Murray



Secretary Sullivan  
Commissioner Sylvia



# Welcome & Introductions

**Carole Cornelison**  
**Commissioner**

Welcome & Introductions

Overview of the AEP

Small Group Break-Out Session

Small Group Report Out

Concluding Remarks

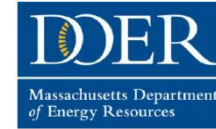
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# Overview of the AEP

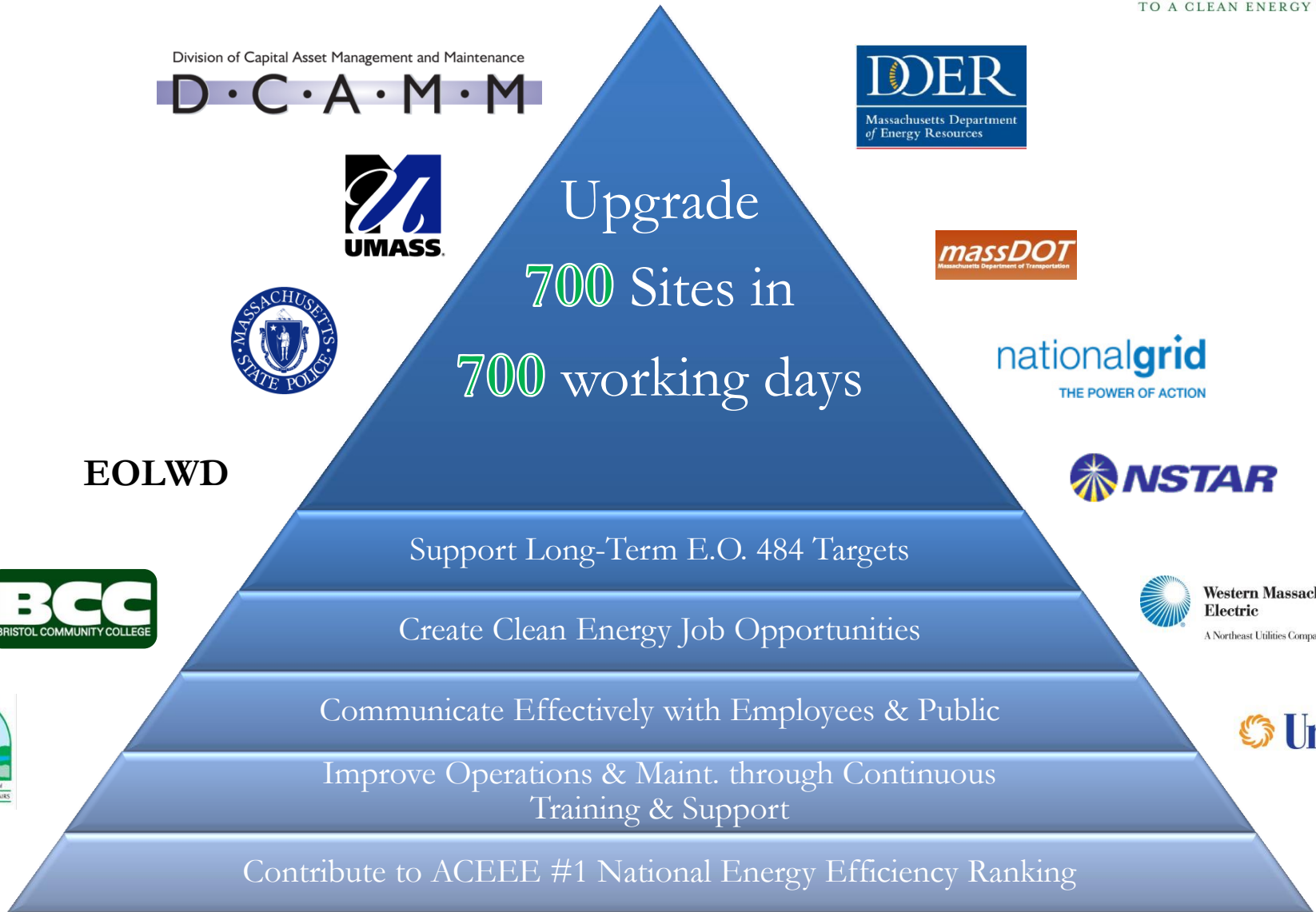
# Program Goals & Objectives

Division of Capital Asset Management and Maintenance

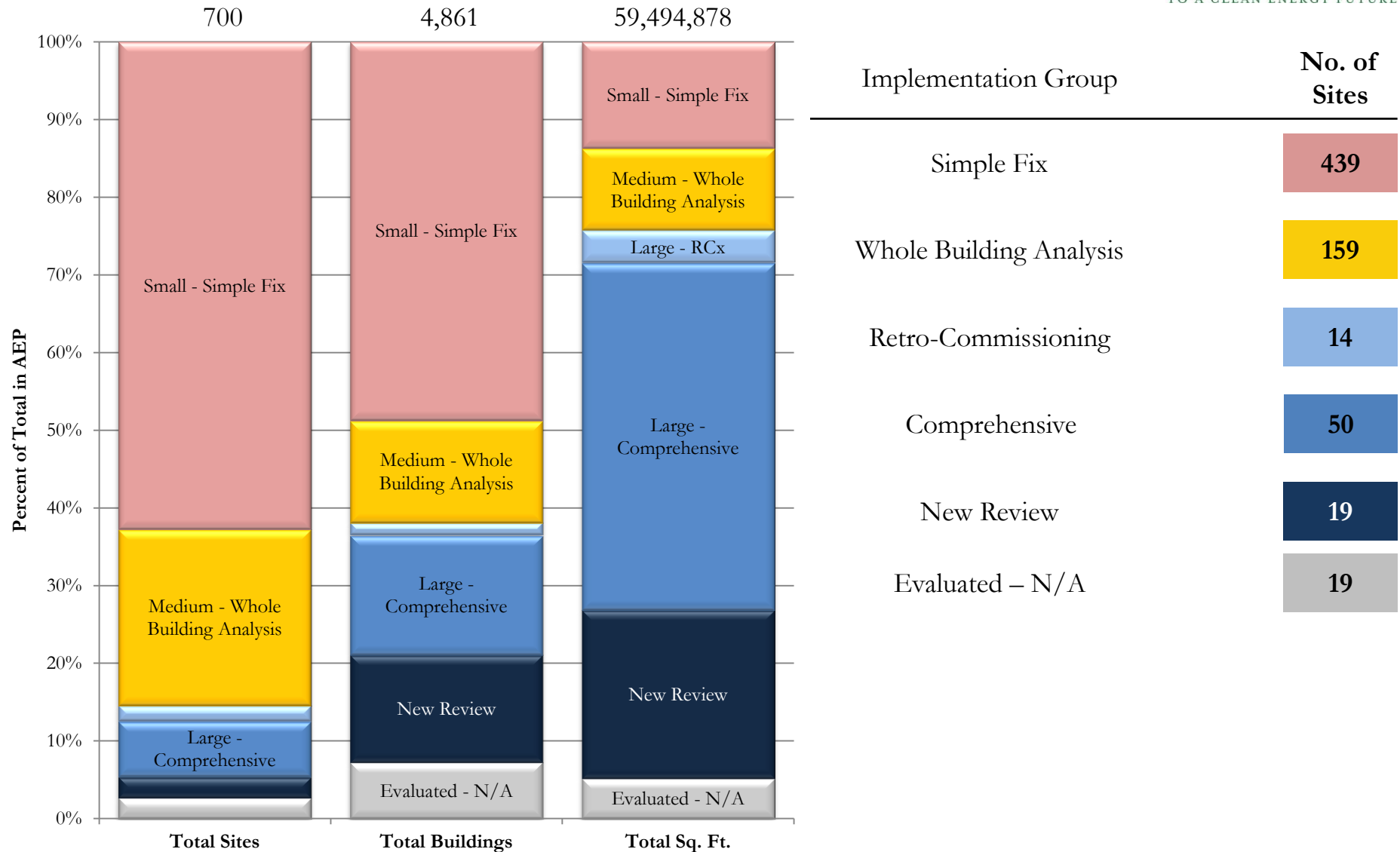
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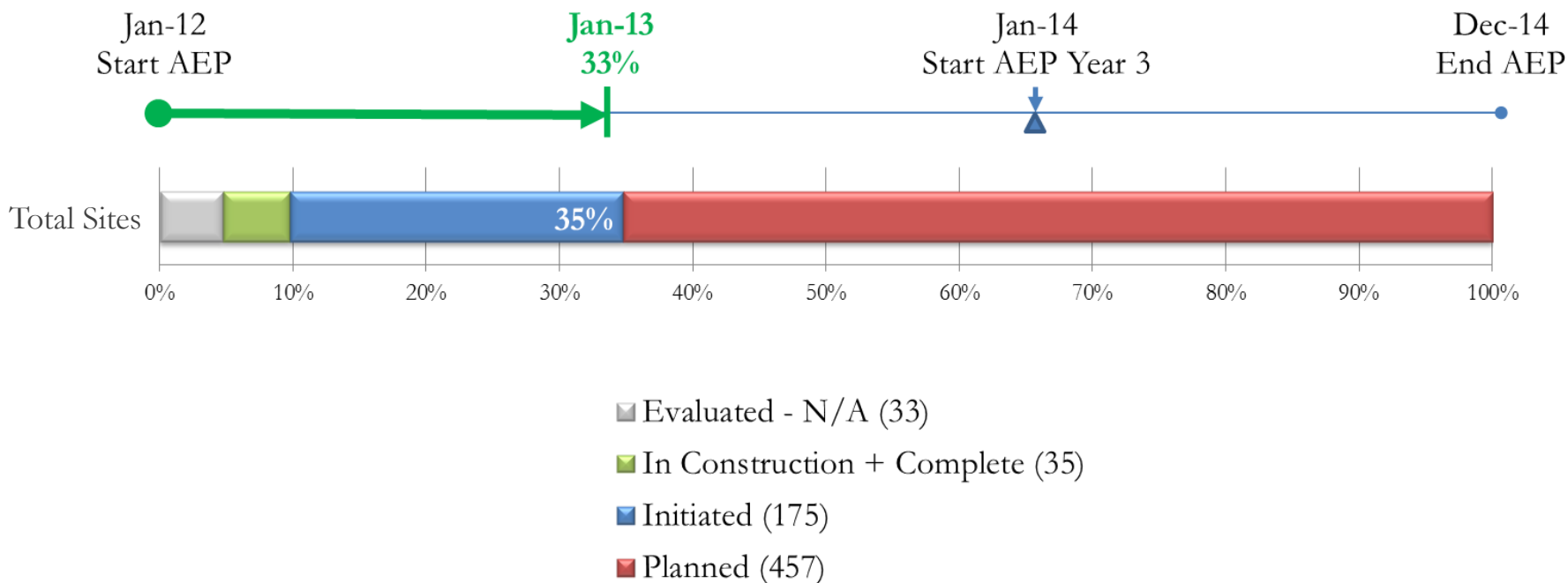


# AEP Implementation Plan



# AEP Progress Highlights

We will have initiated or completed **over 200 Sites** by the end of Q4 2012.



\*DCAMM is in the process of validating progress completed in Q4 2012.



## Massachusetts Department of Transportation

### MassDOT Statewide Energy Efficiency Audits

MHD Dartmouth Faunce Corner – D5

MHD Mattapoisett Depot – D5

MHD Sharon/Walpole Depot – D5

MHD Dartmouth State Road – D5

Status: **Audit Complete**

#### Project Overview:

- Simple Fix energy audits were performed by NXGEN and managed by NSTAR.
- Sites are located within NSTAR electric utility territory.
- Audits addressed lighting measures only.
- Implementation of these ECMs at these sites yield a cumulative savings of over \$12k annually with an average payback of 3.6 years
- Utility incentives are based on \$0.13/KWH and will account for 33% of project funding.



*Administration Building – South Boston*





## Military Division

### Concord Armory Concord, MA

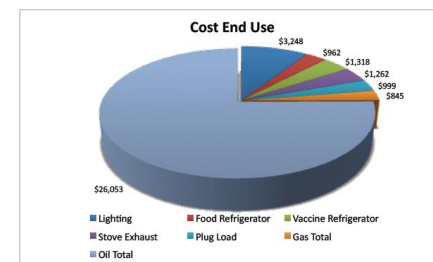
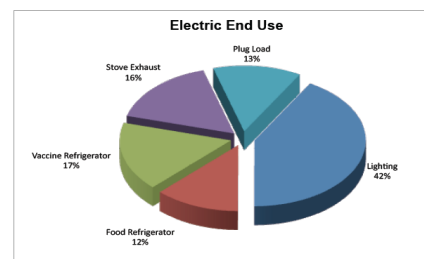
Status: **Audit Complete**

#### Project Overview:

- 36,500 square foot facility consisting of a gymnasium, offices, classrooms and a cafeteria.
- Currently whole building has one heating zone.
- Whole Building Analysis may include:
  - Lighting improvements
  - Occupancy sensors
  - Upgrade HVAC controls - will save 1,891 gallons of oil per year
  - Insulation
  - Window replacement
  - Refrigerator replacement
- Total estimated investment of \$61k & \$19k annual savings -- 3.2 year simple payback.



*Military Division Armory, Concord, MA*



*\*Utility Costs and Electric End Use from EE&D Audit*

## Higher Education

### Salem State University Salem, MA

Status: **Audit Underway**

#### Project Overview:

- Audit contract signed by DCAMM, Salem State University, and Constellation New Energy on 8/30/2012.
- First phase of construction contract to include campus-wide upgrade to:
  - Lighting,
  - Lighting controls
  - Motor replacements
  - Programmable thermostats
  - High-efficiency gas boilers
  - Domestic water fixtures
- Expected to start with the signing of the Energy Services Agreement in January, 2013.
- Anticipated total contract value is \$5,000,000 with estimated savings of \$400,000 per year.



*Salem State University*



- **Identify, create and develop job opportunities** for people to engage in energy conservation work across the Commonwealth.
- **Be inclusive:** develop opportunities for the full spectrum of the labor force - from those entering the labor market for the first time to those that are trying to re-enter the labor market.
- **Promote opportunities for minorities and women**, and work with stakeholders to create a certification program for AEP-specific job categories.

# Labor & Workforce Initial Focus

- Establish an interagency group of advisors representing state agencies, job training organizations, labor unions, contractors and others.
- Learn about existing training programs, especially at community colleges.
- Coordinate with DCAMM's IFM initiative for training facilities personnel.
- Plan for potential seasonal workers for next year.
- Expand vendors for the large comprehensive sites.





# Next Steps

In Q1 2013, DCAMM will seek assistance from Advisors to create and implement an AEP Workforce Development Strategy which includes the following key next steps:

1. Perform a workforce needs assessment of the AEP project portfolio
2. Develop a draft workforce strategy document
3. Identify potential employers
4. Develop a scope of work for AEP worker training and/or certification
5. Examine options for AEP pre-apprenticeship with appropriate unions
6. Schedule a vendor fair to introduce the AEP and elicit involvement
7. Coordinate with DCAMM's IFM Initiative for training facilities personnel
8. Finalize the AEP Workforce Development Strategy



## Objective

Estimate the number of each major labor trade needed to complete the AEP.

## Methodology

- Assessed type of energy conservation measures (ECM) required to date by small, occasional use and large sites
- Identified major labor trade required for each energy conservation measure
- Calculated total number of labor trades (FTE) for AEP

## Next Step

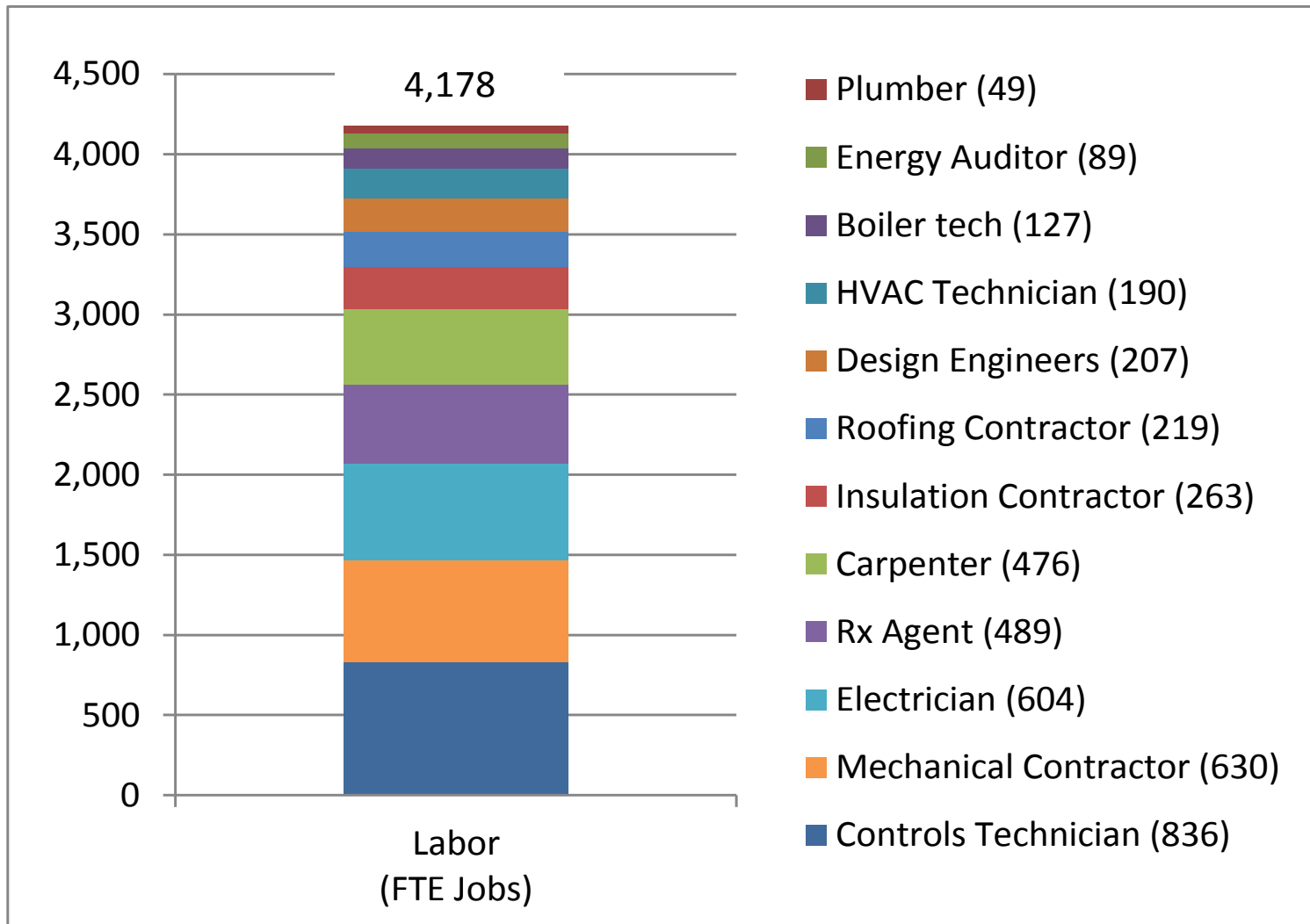
- Create labor profile based on timing of implementation plans

# Assumptions Table

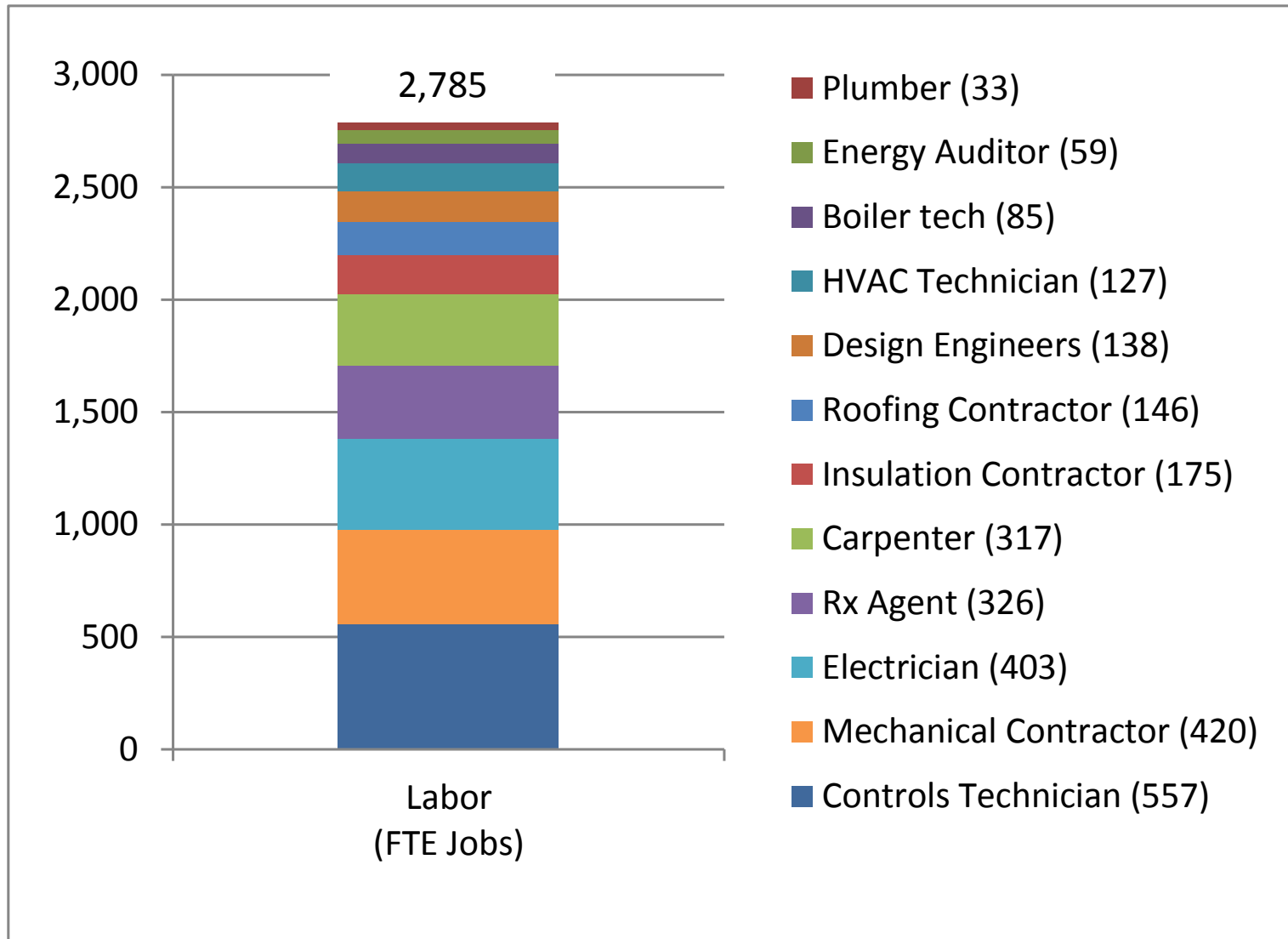
Project Phase	ECM	AEP Investment \$464,200,000	Total %	Labor Trade	Labor (FTE Jobs) 9.0	Occasional Use	Small Sites	Large
						6%	12%	82%
						Total %	Total %	Total %
Audit	Audit	\$9,834,000	2%	Energy Auditor	89	2%	3%	2%
Design	Design	\$22,968,000	5%	Design Engineers	207			6%
Construction	01.00 Lighting	\$37,136,445	8%	Electrician	334	33%	8%	6%
	02.00 Lighting Controls	\$6,317,974	1%	Electrician	57	4%	1%	1%
	03.00 Electric Motors	\$7,202,715	2%	Electrician	65	0%	13%	0%
	04.00 EMS and Controls	\$38,538,734	8%	Controls Technician	347	14%	42%	3%
	05.00 Domestic Water	\$5,477,643	1%	Plumber	49	7%	4%	0%
	06.00 Sewer Conservation	\$0	0%	Plumber	0	0%	0%	0%
	07.00 Process Water Conservation	\$0	0%	Plumber	0	0%	0%	0%
	08.00 Steam Heating Improvements	\$14,097,929	3%	Boiler tech	127	0%	0%	4%
	09.00 VFD's (Variable Frequency Drives)	\$5,377,842	1%	Electrician	48	10%	2%	0%
	10.00 Insulation	\$29,202,092	6%	Insulation Contractor	263	14%	3%	6%
	11.00 Vending and Plug Load Controllers	\$1,004,338	0%	Electrician	9	1%	0%	0%
	12.00 Window and Doors	\$52,864,813	11%	Carpenter	476	8%	10%	12%
	13.00 Biomass	\$3,771,436	1%	Mechanical Contractor	34	0%	0%	1%
	14.00 Boilers	\$24,159,127	5%	Mechanical Contractor	217	0%	13%	4%
	15.00 Chillers	\$33,142,922	7%	Mechanical Contractor	298	0%	0%	9%
	16.00 Cogeneration	\$0	0%	Mechanical Contractor	0	0%	0%	0%
	17.00 Unknown HVAC	\$21,118,042	5%	HVAC Technician	190	1%	0%	5%
	18.00 Retro-Commissioning	\$54,325,951	12%	Controls Technician	489	1%	1%	14%
		\$54,325,951	12%	Rx Agent	489	1%	1%	14%
	19.00 Real-Time Metering	\$10,071,448	2%	Electrician	91	0%	0%	3%
	20.00 Energy Efficient Roof Coatings/Roof Rep	\$24,285,762	5%	Roofing Contractor	219	0%	0%	6%
	21.00 Renewable Energy Systems	\$7,971,444	2%	Mechanical Contractor	72	0%	0%	2%
	22.00 Misc. Specialty Equipment	\$1,005,393	0%	Mechanical Contractor	9	4%	0%	0%
	23.00 Other Recommendations by Proposer	\$0	0%	Mechanical Contractor	0	0%	0%	0%
	<b>TOTAL</b>	<b>\$464,200,000</b>	<b>100%</b>		<b>4,178</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



# AEP Labor Profile (9 labor trade FTE per \$ million)



# AEP Labor Profile (6 labor trade FTE per \$ million)



# Small Group Break-Out Session

In each session, Advisors should consider and record:

1. Current resources, programs, innovations and strategies not to be missed
2. Barriers to success which must be acknowledged and overcome
3. Ideas and suggestions for overcoming barriers and/or ideas for new capacity

Choose your focus area from among:

1. Increasing M/WBE participation to meet and exceed goals
2. Improving outreach to existing minority and female workers for recruitment
3. Strategies and tactics for training and education at community colleges
4. Strategies and tactics for training and education in other venues
5. Assistance with question and methodology development for employer survey

# Small Group Report Out

**Thank you!**

We greatly appreciate your  
time and guidance.